

**Amendment and Response**

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Serial No.: 09/768,748

Confirmation No.: 3864

Filed: January 24, 2001

For: COMPUTER-BASED MULTI-MEDIA COMMUNICATIONS SYSTEM AND METHOD**Remarks**

The Office Action mailed 18 February 2005 has been received and reviewed. Claims 1-3, 8, 10-16, 21-22, 24-27, 32, 34-40, 45-46, 48, 53, 55-61, 65-66, 68-69, 74, 76-82, and 84-85 have been amended. New claims 87-115 have been added. Therefore, the pending claims are claims 1-115. Reconsideration and withdrawal of the rejections are respectfully requested in view of the amendments and remarks provided herein.

**Objected to Claims**

Claims 2-3, 12-15, and 36-38 were objected to by the Examiner for informality reasons. Claims 2 and 36 have been amended to provide proper antecedent basis. However, claim 12 has not been amended as "a local user" is not included in any of the claims upon which it depends. As such, the objection to such claims is overcome. If, for some reason, the Examiner believes that further amendments are required, it is respectfully requested that Applicants' representative be contacted to expedite prosecution of this matter.

**Obviousness-Type Double Patenting Rejection**

Claims 1-86 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 5,452,289, in view of Duran et al. (U.S. Patent No. 6,181,784) and Hyde-Thomson (U.S. Patent No. 5,717,742). Applicants respectfully traverse the rejection under the judicially created doctrine of obviousness-type double patenting. For example, at least some of the pending claims are not obvious in view of the references cited (e.g., there is no motivation to combine such references, each of claims 1-86, as amended, refer to a packet switched network, etc.).

However, to move the case to issuance, submitted herewith is a Terminal Disclaimer which, Applicants submit, is in compliance with 37 C.F.R. 1.321(c) and thereby obviates the Examiner's obviousness-type double patenting rejection of pending claims 1-86.

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The filing of this Terminal Disclaimer is not an admission that claims 1-86 are obvious in view of the references cited and/or relied on by the Examiner in making the judicially created doctrine of obviousness-type double patenting rejection thereof.

Further, the filing of this Terminal Disclaimer is in no manner an admission of acceptance, or of the appropriateness, of the statements and/or allegations made by the Examiner in the Office Action with respect to the pending claims and/or interpretation of the cited references, including statements or allegations taking official notice of one or more elements presented in the pending claims.

Any further specific comments on the Office Action and/or rejections presented therein are deemed unnecessary in view of Terminal Disclaimer obviating the Examiner's obviousness-type double patenting rejection of pending claims 1-86.

**References Cited Below with Reference to New and Amended Claims**

Copies of the references cited below in the section regarding "New and Amended Claims" were provided as part of a Supplemental Information Disclosure Statement filed 25 May 2004. As such, additional attachments of such references to this response are deemed unnecessary.

**New and Amended Claims**

Claims 1-86 as amended and new claims 87-115 are presented herein. Such claims include language, for example, that indicates outgoing information is provided to a remote location via a modem for connection to at least one packet switched network, and/or that a plurality of packets are received via a modem from at least one packet switched network. As these claims add further limitations to certain claims 1-86 previously considered by the Examiner, it is believed that such claims are in condition for allowance as a Terminal Disclaimer overcoming the Examiner's Obviousness-type double patenting rejection is provided herewith.

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The subject matter of such claim language is supported in the application as filed and as required under 35 U.S.C. §112. One skilled in the art would clearly have recognized that the inventors possessed what is described in the claims. As set forth in M.P.E.P. §2163.02:

The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement.

Support for the claim language can be found, for example, on page 10 of the presently pending application which recites that "[t]hose skilled in the art will readily recognize the wide variety of communication interconnections possible with the present system by reading and understanding the following description." In other words, one of skill in the art would recognize the wide variety of communication interconnections based on various portions of the presently pending application.

As discussed in more detail below, for example, the pending application, including documents cited and incorporated by reference therein, describe a framing format for use in data interchange between Data Terminal Equipment (DTE) and Data Circuit-terminating Equipment (DCE). Framing formats for a data link layer protocol are described in the CCITT V.42 standard that is described in CCITT Blue Book, Volume VIII, "Data Communication over the Telephone Network" (hereinafter "CCITT Blue Book Volume VIII") which was incorporated by reference on page 20, line 29 through page 21, line 6 of the pending application.

From the CCITT V.42 standard, along with the large body of information that accompanies this standard and which was known to those skilled in the art at the priority date of the present application, a skilled artisan would clearly have recognized that the inventors possessed what is described in the amended and new claims 1-115. For example, from such information the skilled artisan would recognize that the LAPM framing format is substantially the same framing format as used in other data link layer protocols such as Link Access Procedure on the D-channel (LAPD) and Link Access Procedure, Balanced (LAPB); all of which are derived from the framing format of the well-known data link control protocol, HDLC (high-level data link control). Further, the skilled artisan would recognize that the framing format

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common to the multiple LAP protocols is usable in implementation of one or more different communication interconnections (e.g., usable for data interchange between DTE (e.g., a system such as described according to the present invention) and DCE (e.g., a node on a packet switched network such as an X.25 network)).

In other words, for example, as described in more detail below, the language of the claims indicating that outgoing information is provided to a remote location via a modem for connection to at least one packet switched network and/or that a plurality of packets are received via a modem from at least one packet switched network is supported by the discussion in the pending application regarding the transmission of digital data that follows the CCITT V.42 standard.

Section 1.1 (entitled "General") of Recommendation V.42 of the CCITT Blue Book Volume VIII indicates that the "Recommendation contains an HDLC-based protocol referred to as the Link Access Procedure for Modems, LAPM". The protocol is a data link layer protocol for use in data interchange between a Data Circuit-terminating Equipment (DCE) (e.g., a node on a packet switched network) and Data Terminal Equipment (DTE) (e.g., a system such as described according to the present invention). In other words, the CCITT V.42 standard includes the protocol referred to as LAPM.

Section 1.2 (entitled "Relationship to other international standards") of Recommendation V.42 of the CCITT Blue Book Volume VIII describes that the basic mode of the LAPM protocol is identical to CCITT Recommendations Q.920/Q.921 (CCITT Recommendations Q.920 has been renamed as ITU-T Recommendation Q.920). Also described in Section 8.1 of Recommendation V.42 of the CCITT Blue Book Volume VIII is a frame structure and procedures for proper operation of LAPM for use in data interchange between a DCE and DTE.

Further, as stated in Section 1 (entitled "General") of the ITU-T Recommendation Q.920, Digital Subscriber Signalling System No. 1 (DSS1)/Digital Subscriber Signalling System No. 1 (DSS1) - ISDN User-Network Interface Data Link Layer - General Aspects (3/93) (hereinafter referred to as "ITU-T Recommendation Q.920"), the Q.920 "Recommendation describes in general terms the link access procedures on the D-channel, LAPD" for use in data interchange

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between a DCE and DTE. In other words, the basic mode of LAPM is identical to that of LAPD according to the reference made in Section 1.2 of Recommendation V.42 of the CCITT Blue Book Volume VIII which describes that the basic mode of the LAPM protocol is identical to CCITT Recommendations Q.920/Q.921.

Further, as stated in Section 1 of the Q.920 Recommendation, the "definition of LAPD takes into consideration the principles and terminology of: . . . Recommendation X.25 LAPB user-network interface for packet mode terminals . . .". Recommendation X.25 is set forth in CCITT Blue Book, Volume VIII, Data Communication Networks Services and Facilities, Interfaces, Recommendations X.1-X.32 (Geneva 1989).

The X.25 Recommendation describes the use of Link Access Procedure (LAP) and Link Access Procedure, Balanced (LAPB) for data interchange between a DCE and DTE. The frame structure used in LAPB is shown in Section 2.2 of the X.25 Recommendation and is derived from the well-known data link control protocol, HDLC (high-level data link control) as is the frame structure of LAPM.

X.25 is a protocol standard that dates back to 1976 as described in the book entitled "ISDN and Broadband ISDN" by William Stallings, Macmillan Publishing Company (1992) (hereinafter Stallings). As stated in section 3.7 (page 99) of Stallings relating to X.25, the "standard specifies an interface between a host system and a packet-switched network." The X.25 standard calls out three levels of protocols: the physical level, the data link level and the packet level. The physical level deals with the physical interface between an attached station or DTE (e.g., computer, terminal, or a system such as described according to the present invention) and the link (e.g., a link provided with use of a telephone line as described in the present invention) that attaches the DTE to a packet switching node (DCE) of the network.

The link level or the data link layer protocol manages the communication and packet framing between the DTE and DCE. The link level standard LAPB described in Stallings for use with an X.25 network is a subset of High Level Data Link Control (HDLC) protocol that provides framing between the DTE and DCE; the same HDLC protocol from which the framing provided in LAPM and LAPD are based.

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The third level is the X.25 packet level protocol that provides for virtual circuit service (e.g., connection oriented service including a virtual circuit between end units (DTEs)) or connectionless service (e.g., datagram service like the internet). The connection oriented virtual circuit needs to send a Call Request Packet, receive a Call Accepted Packet over a fixed route through interconnected nodes of the network. Datagram service does not require use of such Call Request and Call Accepted Packets, and sends X.25 packets over the network using routing protocols to reach the destination address. A good exemplary illustration of the relationship between the levels of X.25 is shown in Figure 3.11 of Stallings.

For example, a DTE connects to a packet switching node (the DCE) on the X.25 network using LAPB framing. The X.25 node (the DCE) strips the LAPB header and trailer from each LAPB frame used for data interchange between the DTE and DCE. The data portion previously encapsulated in the LAPB frame by the LAPB header and trailer becomes the X.25 packet for transport using the X.25 network.

Likewise, for example, the X.25 node (the DCE) attaches the LAPB header and trailer to the data portion (i.e., the X.25 packet transported using the X.25 network) for data interchange between the DCE and DTE. In other words, X.25 packet transported using the X.25 network is now framed for communication to the DTE.

In other words, the LAPB frame format is usable for connection to at least one packet switched network (e.g., the X.25 network). Substantially the same framing format used in LAPB is used in LAPD and LAPM as described above. As such, the description in the pending application of the framing format of LAPM indicates that it is usable for data transfer between the DTE (e.g., a system such as the one described according to the present invention) and a DCE (e.g., a packet switching node of an X.25 network). In view of at least the above remarks, the language of the claims is supported in the present application by at least the description of the transmission of digital data which follows the CCITT V.42 standard.

Further, for example, the language indicating that information is provided to a remote location via a modem for connection to at least one packet switched network and/or that a plurality of packets are received via a modem from at least one packet switched network is also

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supported by the discussion regarding the use of cellular networks to transport the packets. For example, as described on page 5, lines 10-21 and on page 36, line 44 through page 37, line 15, the present invention can be used with a cellular network.

Based on the Section 2.7 entitled "Signaling Formats" of the "EIA/TIA Interim Standard, Cellular System Dual-Mode Mobile Station - Base Station Compatibility Standard", IS-54-B (April 1992) it is clear that prior to 1993 certain cellular networks were packet switched networks. Further, as is clearly described on web page ([www.telescada.com/cdpd.htm](http://www.telescada.com/cdpd.htm)) accessed on 29 April 2004, a Cellular Digital Packet Data (CDPD) network is clearly presented as a packet switched network. This CDPD network is stated as being announced in 1992. Yet further, as generally set forth in the article by Moe Rahnema, entitled "Overview Of The GSM System and Protocol Architecture" IEEE Communications Magazine (April 1993), the GSM system (which was also available prior to 1993) is illustrative of yet another type of cellular packet switched network.

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It is respectfully submitted that the pending claims are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for  
**SHARMA et al.**

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**CERTIFICATE UNDER 37 CFR §1.8:**

The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 18 day of AUGUST, 2005, at 10:08 A.M. (Central Time).

By: Name: Sandy Truehart